



The Neighborhood Water Stewardship Program:

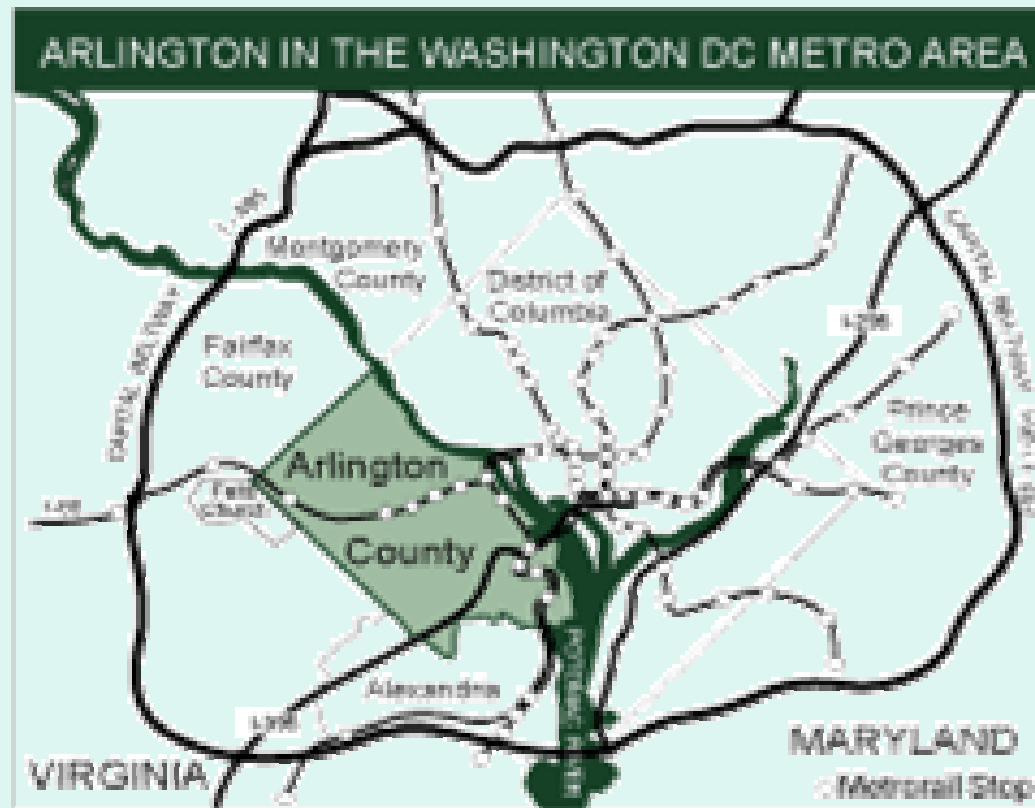
An Innovative Approach to Behavior Change in Northern Virginia

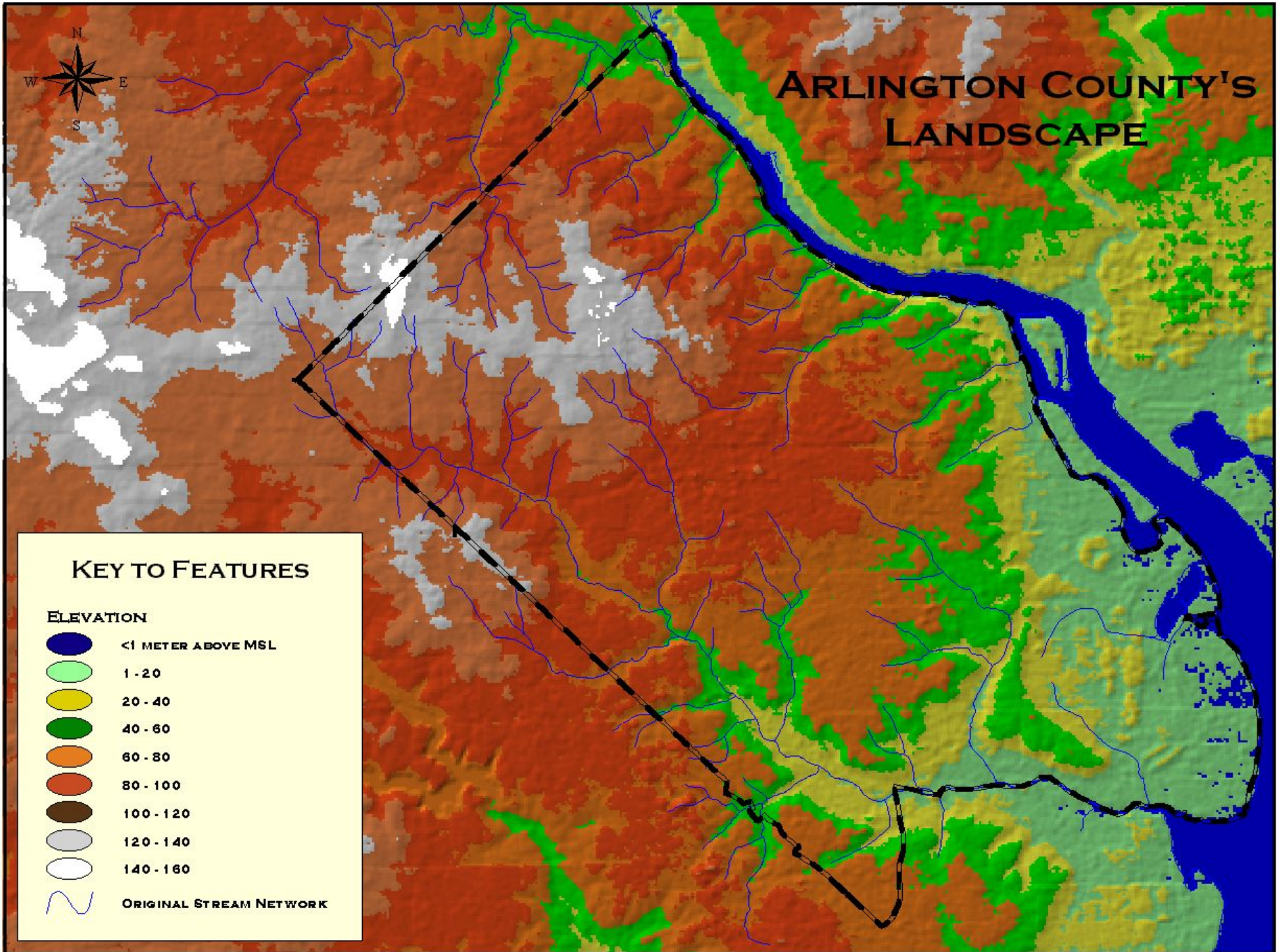


Arlington County, VA

- 26 square miles, adjacent to Washington, D.C.
- 190,000 residents in 2000 census
- Diverse population - 40% residents Hispanic, African, Asian or multi-racial
- Phase 1 Stormwater permit
- Average 40% imperviousness
- Chesapeake Bay Watershed
- Virginia – Tributary Strategies







Partners

- Arlington County, City of Alexandria, City of Falls Church
- Arlingtonians for a Clean Environment, Empowerment Institute



Development of Program

- Attended 2001 NPS education conference with presentation on behavior change;
- After conference, worked on grant proposal with local partners and connected with Empowerment Institute;
- Created version of program focusing on **water**.



The Program Need

- Successful government regulation of “point source” pollution;
- Next frontier: controlling nonpoint source pollution through individual behavior change;
- Moving beyond awareness-raising to action.



Public Participation Strategy

- Neighbor-to-neighbor selling points
 1. **Community building;**
 2. **Environmental improvement;**
 3. **Improve the neighborhood.**
- Between 20% to 30% participation rate depending on community
- Strategy: social diffusion research



Exercise 1

- General script for inviting neighbors to participate has been tested and proven over time.
- Practice “inviting” your neighbor to participate in the program.



Social Diffusion Research

- Research on spread on innovations in society:
 - Innovators – 2.5%
 - Early Adopters – 13.5%
 - Early Majority - 34%
 - Late Majority - 34%
 - Laggards - 16%
- Innovations that will succeed become unstoppable after reaching 15-20% of population.



Progression into Water Stewardship Program

- Behavior change and public participation model could be adapted to address different environmental and societal needs.
- Need - residential NPS water pollution.
- NFWF funding and partnership with local governments and non profits to develop a pilot for the Chesapeake Bay watershed.



How is Program Unique?

- Goes beyond awareness to help participants learn new behaviors;
- Ability to quantify results;
- Trained coach works with team;
- Neighborhood participation.





Interactive demonstrations

- Allows family involvement
- Mini-enviroscape
- Raingarden (sponge) demo
- Testing toilet for leaks
- Yard “walkabout”



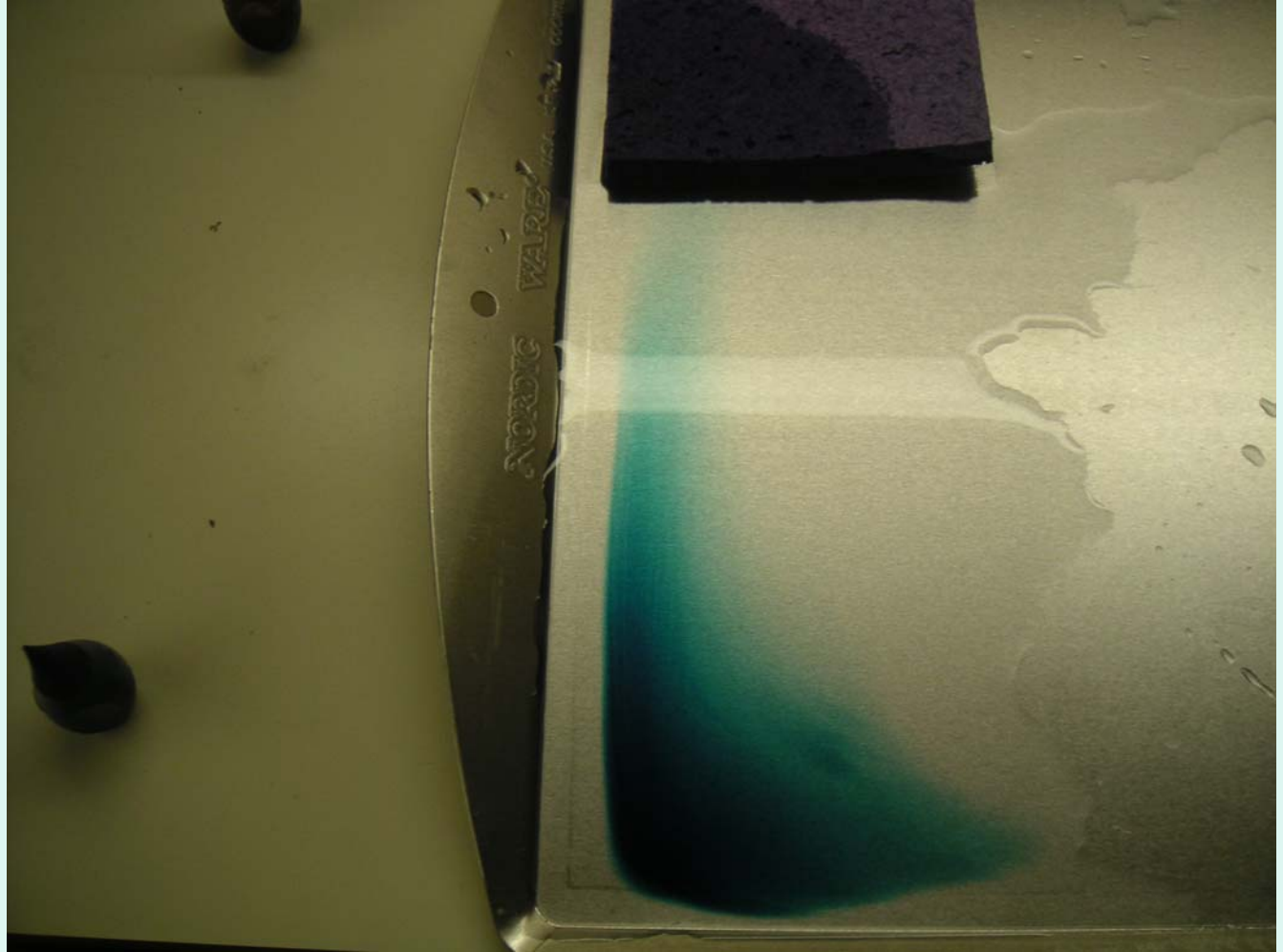




Enviroscape



Raingarden/sponge



The Basic Program

- Neighborhood Walk
- Neighborhood Gathering
- 4 Team Meetings
 - Team Building
 - Water Quality
 - Water Conservation
 - Helping Out



Program Design

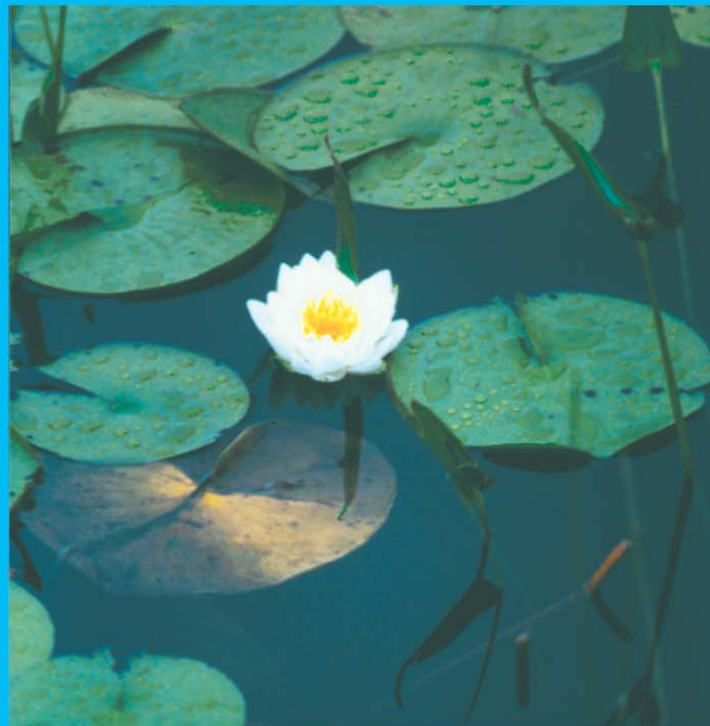
- Workbook Program with 3 Topic Areas: water quality, water conservation, helping out (community activities).
- Actions: 10 to 12 per topic area (32 in total).
- Meeting Format: Neighbors form teams of 5 to 8 households from block and meet 4 times over 2 months to carry out the actions they choose.
- Lifestyle assessment before and after program (key for tracking behavior changes!)





Livable Neighborhood

Water Stewardship Program



...creating a water-friendly lifestyle

A Program of Empowerment Institute



6. POOP SCOOP

Cleaning Up After Your Dog

WHY ACT?

Poop pollutes. Thousands of dogs live in the Rappahannock River area and their waste is a health risk when deposited on streets and lawns. It can be washed down storm drains and end up in the stream. The bacteria, together with other pollutants, can make the water unsafe for swimming and cause health hazards for humans and aquatic life. The Rappahannock River is currently listed as an impaired waterway by the State of Virginia because of bacteria levels. This Water Action will show you how to take care of your pet's poop without polluting your neighborhood and its water quality.

WATER ACTION

- i When walking your pet, bring a small trowel or "pooper-scooper" and a plastic bag.
- i Make sure your pet does not pee directly on the pavement. It is less likely the next rainstorm will wash the waste into the storm drains or local tributaries. Also avoid planted areas and your neighbor's yard. Choose a grassy area instead where you can easily pick up your pet's poop, and where your pet's pee will not bother anyone or harm plants.
- i After your pet does its business, scoop the poop and place it in the bag. Tie it shut until you get home.
- i Flush the poop down the toilet so it can be treated in the community sewage or septic system. Your other alternatives are to bury the poop six inches deep in the ground or place the bag in your garbage can.

MATERIALS

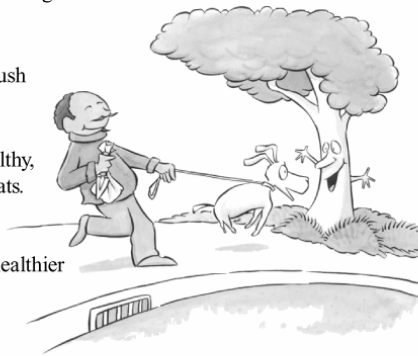
Trowel or "pooper-scooper," plastic bag or container

TIME

A minute or two to scoop and flush

BENEFITS

You help keep the watershed healthy, protecting fish and wildlife habitats. You also improve the neighborhood for all to enjoy, while giving children a cleaner, healthier place to play.





WATER-FRIENDLY LIFESTYLE ASSESSMENT

This assessment will help you understand the opportunities available to better steward your communities precious water resources. It is divided into three sections – water quality water conservation and helping out. You will fill it in before and after each section of the program. At the end of the program, when you hand in your “before” and “after” results, you will be provided a report of the positive environmental impact from the actions taken.

If you are unable to complete any of the actions because of the season, make a pledge to complete them by filling in the date in the “Will Do Action By When” column.

WATER QUALITY ASSESSMENT

Place a check next to those statements that are true for you:

ACTIONS

1. **Toxic Sleuth** —*Reducing toxic products in your home*

I use non-toxic cleaning products in my home.

BEFORE THE PROGRAM			AFTER
DOES NOT APPLY	ACTION DONE	WILL DO ACTION BY WHEN?	ACTION DONE
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>

2. **A Natural Lawn** —*Reducing the use of weed killers and fertilizers on your lawn*

I use an organic or slow-release fertilizer on my lawn.

I hand pull weeds to avoid using chemicals.

I overseed my lawn to crowd out weeds.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>

3. **A Green Gardener** —*Reducing the use of toxic pesticides, herbicides and fertilizers on your garden*

My garden has pest and drought-resistant native plants.

I manage garden pests without using toxic pesticides.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>

Exercise 2

- Fill out Part 1 of the lifestyle assessment for yourself.



Program Results

- Trained 67 team leaders since 2003, and they have led 29 teams through the program;
- In 2004, 44% of households invited came to gathering, and 81% joined the team;
- Each team averages about six households.





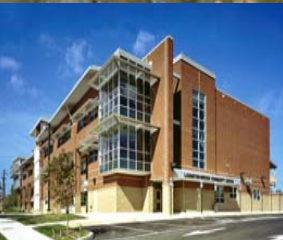
Behavior Change

- Each household on average has taken 7 behavior change actions, including reducing use of toxic chemicals, fixing water leaks, and installation of rain gardens, cisterns, and rain barrels.
- Total actions taken by all teams (as of June 2006) was 818;
- 1.9 million gallons of water saved by all teams reporting results to date.



Top Ten Actions Taken

1. Reduce toxic products 35
2. Reduce personal water use 34
3. Reduce dishwashing water use 33
4. Fix water leaks 32
5. Reduce shower/bath water use 25
6. Reduce toilet flushes 25
7. Rain barrel/downspout extender 22
8. Reduce garden water use 21
9. Reduce vehicle miles traveled 20
10. Create rain garden 18



Community Campaign

- Number of teams needed to reach 15% of population in Four Mile Run watershed: 1,420 teams.
 - Number of teams in renter units: 759
 - Number of teams in owner occupied units: 579



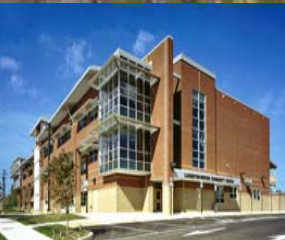


Year	Team Goal	Total Teams
2006	15	40
2007	60	100
2008	60	160
2009	60	220
2010	200	420
2011	200	620
2012	200	820
2013	200	1020
2014	200	1220
2015	200	1420

2005-2006 Activities

- Develop training materials and training session outlines for team leader and coach trainings;
- Organize 3 team leader trainings;
- Organize 1 coach training;
- Create a listserv for program participants;
- Formalize partnerships with 5 businesses or organizations to create common goals that will help to grow the Water Stewardship Team program.





Examples of Actions Taken by Team Members

























JUN 13 2004



Oak Haven Water Stewardship Group

Newsletter 1, April 2004



Map: Northern Virginia Regional Commission

Oak Haven Water Stewardship Group formed

Since February 2004 a group of residents from Oak Haven Drive, Langston Lane and Dorchester Avenue in Falls Church City have held meetings to discuss water issues on our properties and water stewardship in our neighborhood. We focused on the local Trammel Branch of Four Mile Run. The meetings were part of a larger initiative, the *Livable Neighborhood Water Stewardship Program* that aims to conserve and restore Four Mile Run and improve the Chesapeake Bay. The original purpose was to find out what we could do to improve the health of Four Mile Run and our neighborhoods.

MEET THE CANDIDATES!

Discuss Our Local Water Issues And More!

*You are invited to a meeting on
24 April 2004 at 1.00 – 2.30 p.m.
at 500 Dorchester Avenue, home of Duane and Linda Nystrom, to
meet the candidates for the upcoming Falls Church City Council
elections (phone 703 532 8369)*



The
Arlington
A Condominium
2825-2841

THE ARLINGTON
A CONDOMINIUM
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OLD NAVY



Providence
**NATIVE
PLANT SALE**

PRIVATE PARKING
PARKFARFAX
RESIDENTS USE
ONLY
TRESPASSERS WILL
BE PROSECUTED



Other Materials

- Coaches' kits with materials for demonstrations
- Water conservation kits – one basic one, and one more expensive one (including a low flow showerhead and faucet aerator)



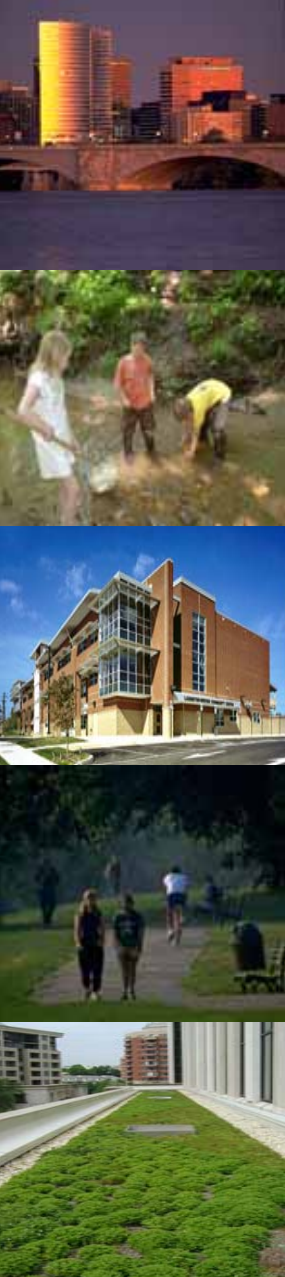


Participant Feedback

“My neighbors responded very enthusiastically to the invitation to join a Water Stewardship Team and were ready to move into action immediately. Our team of 10 neighbors was very diverse, with renters and homeowners alike answering the call.”

Kate Watters, Alexandria, VA





Participant Feedback

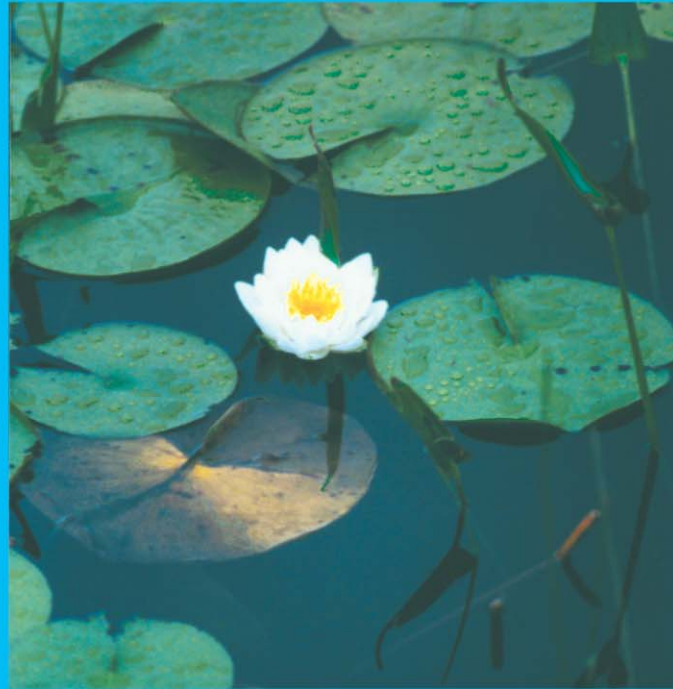
“We enjoyed getting to know each other better. We liked the individualized nature of the program, which encouraged us to choose the actions each of us wanted. We found the workbook easy to use because the actions were laid out step-by-step.”

Laurie Huber, Falls Church, VA



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Questions?



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